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ABSTRACT

Studies have not made clear what specific teacher competencies are important for teachers of health occupations in secondary schools or vocational centers. This study, therefore, used Flanagan's Critical Incident Technique to collect reports of observed teacher behaviors which students perceived as being especially effective or ineffective for teacher performance. The kinds of behaviors students commented on were (1) instructional methods, (2) classroom management, (3) personal and career guidance, (4) student evaluation, and (5) coordination of plans with the health facility to obtain field experience for students. Overall results showed that students were most concerned with and favorable to teachers' methods of instruction and most disturbed by improper classroom management. This information, obtained from direct classroom experience, should guide educators trying to teach health personnel to become as skilled at teaching as they are in their health area. (CD)

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COMPETENCIES FOR SECONDARY HEALTH OCCUPATIONS TEACHERS

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Since the passage of the Vocational Education Act of 1963, the growth of secondary level occupational programs has been extensive. Further expansion of these programs has occurred as a result of the Vocational Education Amendments of 1968. Presently, programs for the health occupations represent one of the most rapidly growing fields in vocational and technical education. However, the number of personnel who are adequately prepared to teach in these rapidly expanding programs is insufficient. This is particularly true at the secondary or high school level.

Secondary level programs for the health occupations represent an area of vocational teacher education in which teacher behavior effectiveness criteria have not been identified. This fact, which is shared with other programs in vocational education, is partly due to the basic difficulties inherent in establishing criteria of teacher effectiveness in any area. The identification of such criteria is also complicated by the fact that vocational education teachers must possess occupational competencies in their vocational specialization as well as teaching competencies (Cotrell, 1971; Vogler, 1972).

According to Foran and Kaufman (1971), there are an unknown number of health occupations teachers who have not been exposed to a teacher education program. Teachers for programs in health occupations are frequently selected from the qualified health practitioners within a health specialty. These teachers

generally are graduates of hospital-based programs or post-secondary technical programs. Although these skilled practitioners have the occupational skills needed for teaching in their specialty, they lack the professional skills necessary to be effective teachers in vocational and technical education (Holloway and Bailey, 1971).

A common way of talking about teacher effectiveness is in terms of desired competencies, performances, or ability to do. The problem of defining competent teacher behavior can be approached as a problem of defining job requirements. Results of a study by Flanagan (1948) indicated that the most adequate of several procedures for defining the requirements of a job was the systematic analysis of good and poor job performance, i.e., the critical incident technique. This article deals with a recent study conducted by the author in which the critical incident technique was used to gather reports of observed teacher behaviors which students perceived as being especially effective or ineffective for teacher performance.

Methodology

According to Flanagan (1954), the critical incident technique is essentially a set of procedures for collecting direct observations of human behavior in clearly defined situations. The technique includes the procedures for collecting reports of observed critical incidents which have special significance to the observer and meet systematically defined criteria. A critical incident is any observable activity that is sufficiently complete in itself to permit inferences and predictions to be made about

the persons performing the act and where the consequences of the act are definitely effective or ineffective. Critical incident reports contain one or more critical behaviors. A critical behavior is a specific behavior, abstracted from a critical incident report, which clearly brings about positive or negative consequences.

Collection and Categorization of Critical Behaviors

Students in the health occupations programs of four secondary schools and five area vocational centers in Illinois were asked to write critical incident reports of at least one effective and one ineffective action of a health occupations teacher; they were strongly encouraged to write reports of as many critical incidents as possible. From a total of 923 critical incident reports collected from 264 secondary level health occupations students, the author abstracted 1,141 critical behaviors of health occupations teachers. These critical behaviors were typed on individual cards and were sorted into categories of similar behaviors. As the category and sub-category headings were developed, category headings suggested by the literature on teacher effectiveness were taken into account. Category headings were also suggested by the content of the critical behaviors abstracted from the critical incident reports. The category and sub-category headings which resulted are as follows:

1. Instructional methods and techniques
    a. classroom and hands-on learning situations
    b. hands-on learning situations
2. Management

3. Guidance
   a. career guidance
   b. personal guidance
4. Evaluation
5. Coordination

Data Obtained

Numbers and Percentages of Critical Behaviors

The table shows the numbers and percentages of critical behaviors obtained for each category from secondary health occupations students.

NUMBER AND PERCENTAGES OF CRITICAL BEHAVIORS OBTAINED FROM THE CRITICAL INCIDENT REPORTS OF STUDENTS

Categories	Effective Critical Behaviors		Ineffective Critical Behaviors		Total No. Behaviors	
	No.	%	No.	%	No.	%
1a. Classroom and hands-on	264	23	119	11	383	34
1b. Hands-on	161	14	25	2	186	16
Sub-total	425	37	144	13	569	50
2. Management	94	8	234	21	328	29
3a. Career guidance	66	6	0	0	66	6
3b. Personal guidance	40	3	9	1	49	4
Sub-total	106	9	9	1	115	10
4. Evaluation	23	2	57	5	80	7
5. Coordination	49	4	0	0	49	4
Total	697	60	444	40	1,141	100

Students contributed the largest number of effective and ineffective critical behaviors for category 1, instructional methods and techniques. The number of critical behaviors obtained for this category was 569, or 50 percent of all the critical behaviors contributed by students. Most of these critical behaviors, 383, or 34 percent, occurred in sub-category a, classroom and hands-on learning situations. The next largest category of effective and ineffective critical behaviors was category 2, management, with 328, or 24 percent of all the critical behaviors.

The largest number, 425, or 37 percent of effective critical behaviors occurred in category 1, instructional methods and techniques. The largest number, 234, or 21 percent of ineffective critical behaviors occurred in category 2, management. Category 5, coordination, contained the smallest number, 49, or 5 percent of effective and ineffective critical behaviors. No ineffective critical behaviors were contributed by students in sub-category 3a, career guidance, or in category 5, coordination.

Category Content

In order to clarify for the reader the content and the kinds of critical behaviors identified, a brief description of the content of the critical behaviors in the categories along with selected effective and ineffective critical behaviors of teachers obtained from their students is presented.

1. Instructional methods and techniques. This category of critical behaviors, containing 50 percent of all the critical behaviors contributed by students, was divided into two sub-categories. Sub-category a, classroom and hands-on learning situations, contains those critical behaviors which relate to the instructional methods and techniques demonstrated by the teacher in the classroom, in the classroom laboratory, and in the health facility. On the basis of the numbers of effective and ineffective behaviors identified in this category, students considered behaviors such as the following to be the most crucial for evaluating teacher performance.

a. selected effective behaviors:

- used diagrams to show each part she was explaining when she was teaching the anatomy of the body.
- helped some girls who she knew had cheated to study and work for themselves.
- individualized the course for students interested in veterinary medicine.

b. selected ineffective behaviors:

- went so fast over class material that many students couldn't understand it.
- required students to learn too many medical terminology terms in too short a period of time.
- explained things in terms students couldn't understand.

Sub-category b, hands-on learning situations, contains only those critical behaviors which teachers demonstrated in the classroom laboratory or in the health facility in the performance of their instructional responsibilities.

a. selected effective behaviors:

- demonstrated very thoroughly the procedure for giving flouride treatments.

- had students return demonstration on how to fill a hypodermic syringe.
- took time to help a student read blood pressures accurately.

b. selected ineffective behaviors:

- left student by herself to care for a very difficult elderly lady.
- didn't explain to student what she was doing wrong in the nursing skills lab.
- neglected to correct students when they graphed temperatures wrong.

2. Management. The critical behaviors of secondary level health occupations teachers placed in this category relate to the teachers' management of their own and the students' behavior. Critical behaviors such as those listed below were next in importance to instructional methods and techniques behaviors for evaluating teacher performance. However, students expressed more concern about poor teacher performance in the area of management than in any other area of teacher performance.

a. selected effective behaviors:

- made it explicit to class that study time is not the time to be goofing off.
- settled an argument between two students without hurting their feelings.
- handled situation calmly and sensibly when student got sick during class.

b. selected ineffective behaviors:

- confronted student in the classroom about her actions on the job; became rude to the student.
- allowed students to be noisy and out of control when she was trying to explain things.
- threatened offenders and the class, but did not carry out threat.

3. Guidance. All those critical behaviors of secondary level health occupations teachers which were related to the

teachers' efforts to provide occupational information and occupational field trip experiences for students were placed in sub-category a, career guidance. No ineffective critical behaviors of teachers were obtained for this sub-category.

a. selected effective critical behaviors:

- prepared a program to allow students to do some volunteer work in some health careers.
- informed student concerning the courses she should take to get into a particular health career.
- explained the functions and educational requirements of the medical career fields.

Sub-category b, personal guidance, contains those effective and ineffective critical behaviors of teachers related to personal counseling of students. According to the numbers of critical behaviors identified, students considered the career guidance activities of teachers more important than their personal guidance activities.

a. selected effective critical behaviors:

- asked student for her side of the story when she could not get along with the boss.
- gave troubled and depressed student time to be alone and think things out.
- listened to a student to talk about a personal problem.

b. selected ineffective critical behaviors:

- called a student for a private conference to get information about a second student.
- asked the students in class if they smoked pot or drank liquor and smoked cigarettes.
- called student's mother to school for an interview and talked about the student's allergies rather than how the student was doing in school.

4. Evaluation. This category contains the critical behaviors identified by students which pertained to the practices and procedures used by health occupations teachers in the testing

and grading of students. Students reported more than double the number of ineffective as compared to effective teacher behaviors.

a. selected effective critical behaviors:

- had a talk with some students who were caught cheating on a test.
- let some girls who were cheating have another chance.
- told students separately what their grades were and where they needed help.

b. selected ineffective critical behaviors:

- gave a unit exam on materials which hadn't been covered.
- made a multiple choice test which was not clear because more than one answer could have been right.
- gave a student a low nine weeks grade because she did not like him personally.

5. Coordination. Critical behaviors in this category include all those critical behaviors which indicated the teachers' involvement in the coordination of plans with health facility personnel in order to obtain hands-on learning experiences for students. No ineffective critical behaviors were obtained in this category. Although this category of critical behaviors contains the smallest number of critical behaviors and on this basis is perhaps of least importance to students, it is nevertheless vitally important because it attests to the teachers involvement with the community.

a. selected effective critical behaviors:

- arranged for a student to go to a large hospital to work in her field of choice.
- talked to a student's head nurse and supervisor about an evaluation which was lower than it should have been.
- introduced student to person (nurse) whom she was to observe on the hospital ward.

Critical Requirements

After the critical behaviors, typed on individual cards, had been categorized, the next step was to further separate the cards arranged under the categories described into smaller groups of cards representing very similar critical behaviors. After determining that each group did contain no less than three very similar critical behaviors, a statement was written which most exactly described the content of the critical behaviors in each group. These statements were called critical requirements. A total of 98 critical requirements were derived from the critical behaviors obtained from students. Fifty-seven were effective critical requirements representing specific competencies for effective secondary level health occupations teacher performance and 41 were ineffective critical requirements representing specific incompetencies to be avoided for effective secondary level health occupations teacher performance.

On the basis of the large numbers of critical behaviors contained in each critical requirement, 45 to 19, the following effective and ineffective critical requirements seemed especially important to students. They are listed in descending order of importance.

1. Effective critical requirements.

   a. gives clear, thorough explanations when discussing instructional content and health care procedures.

   b. demonstrates how to perform health care procedures in the classroom laboratory.

   c. uses instructional aids such as films, models, and diagrams to clarify instructional content.

d. controls student behavior: remains calm, matter-of-fact, enforces existing policies.

e. works with students while providing instruction to them in the health facility.

f. requires student to practice health care procedures on each other or on appropriate equipment in the classroom prior to caring for patients in the health facility.

g. shows concern and takes steps to assure the welfare of her students.

h. provides field trip experiences for students in order to increase student knowledge of the various health occupations.

i. assists student in making up work after absences.

j. encourages student to assume responsibility for their own learning.

2. Ineffective critical requirements.

a. uses verbal communication techniques that block communication, i.e., speaks too much, too softly, too fast, or away from students.

b. loses self-control: cries, leaves the room, stops teaching.

c. speaks to students in a sarcastic or inappropriate way.

d. covers too much material and/or in too short a period of time.

e. yells at students; tells them to shut-up.

f. embarrasses students in front of others.

g. presents content in such a way that it is not clearly understood, i.e., teaches above the students' level of understanding, uses terms students do not understand, or gives incomplete or superficial explanations.

It is apparent, after examination of the effective critical requirements, that all but three (d, g and h) relate to the teachers' (1) use of explanations, demonstrations, and

instructional aids in the classroom, (2) requirements for student clinical practice, (3) assistance to students in making up work, and (4) encouragement of students to assume responsibility for their own learning. Critical requirement describes the manner in which the effective teacher manages student behavior. Critical requirement relates to a personal guidance function of the teacher and critical requirement relates to a career guidance function of the teacher.

Examination of the list of ineffective critical requirements suggests that students regard poor verbal communication by the teacher as the most important single ineffective behavior of the teacher. However, four of the remaining six ineffective critical requirements (b, c, e and f) relate to the teachers' ineffective management of her own and the students' behavior. Critical requirements d and g relate to poor instructional methods and techniques employed by the teacher. Overall, it seems apparent that students' greatest concerns regarding ineffective behaviors of teachers relate first to classroom management and then to the instructional methods and techniques employed by their teachers.

Implications

The statement was made in the introduction of this article that effectiveness criteria for secondary health occupations teacher performance have not been identified. The critical incident technique used in this study to identify the critical behaviors of teachers (from which the critical requirements were derived) provides a relatively precise and comprehensive

definition of effectiveness on a job in terms of what people actually do on the job. Therefore, it is emphasized to health occupations teacher educators, administrators, and teachers that the effective critical requirements derived in this study represent specific competencies required for effective secondary level health occupations teacher performance and that the ineffective critical requirements represent specific incompetencies to be avoided for effective teacher performance.

The foregoing findings regarding the importance attached to the various activities of secondary health occupations teachers by students should be used by teacher educators in planning the curriculum content of secondary level health occupations teacher education programs. Since the critical behaviors identified in this study are based on actual situations, they provide a realistic basis from which secondary health occupations teacher educators can develop appropriate teaching methods and techniques. Examination of the critical behaviors will provide teachers and prospective teachers with a concrete picture of some of the problems they will encounter in the teaching situation. And last, the critical requirements derived in this study provide secondary level health occupations teachers with a basis for the development of a set of guidelines to be used for teacher self-evaluation.

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